THE MICROWAVE-ASSISTED ORGANOCATALYZED REARRANGEMENT OF PROPARGYL VINYL ETHERS TO SALICYLALDEHYDES DERIVATIVES

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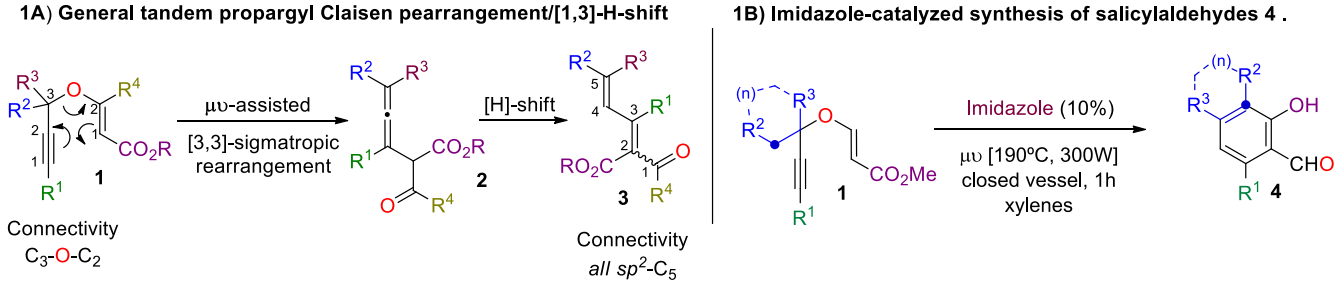
Propargyl vinyl ethers **1** constitute a privileged group of small size, densely functionalized and readily accessible linear scaffolds. The main key to the chemical reactivity encoded in these structures is the [3,3]-sigmatropic rearrangement (propargyl Claisen rearrangement) shown in Scheme **1A**,[1] which takes place irreversibly and under thermodynamic control to generate the allene **2** which isomerizes to dienal **3**. We have developed a microwave-assisted, catalytic (imidazole 10 mol-%) and scalable methodology to transform these allenes into salicylaldehyde motives supported on a broad range of topologies, which spanned from simple aromatic monocycles to complex fused polycyclic systems.[2] The reaction manifold is depicted in Scheme **1B**. We have performed a theoretical study of this reaction which is in full agreement with the observed experimental results. The reaction scope and the proposed mechanism will be commented in our presentation.



Scheme 1

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References:

[1] D. Tejedor, G. Méndez-Abt, L. Cotos, F. García-Tellado, *Chem. Soc. Rev*. **2013**, *42*, 458-471.

[2] a) Manuscript in preparation. b) For a previous communication, see: D. Tejedor, G. Méndez-Abt, L. Cotos, M. A. Ramirez, F. García-Tellado, *Chem. Eur. J.* **2011**, *17*, 3318-3321.

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